Phase 3 (**Graphical User Interface**)

What to do?

- Make a graphical user interface so that we can load the processes, run them and view the details
- All commands and options must be provided using buttons or menu items. There should be minimum usage of keyboard.

You are required to support the commands listed below. Any other useful command according to your implementation would be appreciated but not required.

Process Related Commands

Load Process	Prompts the user for a process filename and loads the process into memory. Displays the process ID of the loaded process
Execute Process	Asks user to select process / enter a process id and then **completely** execute only the selected process
Debug Process	Asks user to select process/ enter a process id and then execute **only one instruction** of the selected process
Debug All	execute **only one instruction** of the current running process amongst all the loaded processes
Execute All	**completely** execute all the loaded processes
Kill Process	Forcefully kill a process
Create Clone	Create a clone of selected process
*Block Process	Block a process (move it to blocked queue)
*Unblock Process	Unblock a process (move it from blocked queue to ready queue)

Display Related Commands

List Process	Lists the processes currently loaded. There should be additional option to display processes in a specified state (like blocked)
Display PCB	Displays the PCB of the selected process
Display Page Table	Displays the page table of the selected process
Memory Dump	Show the memory dump of the selected process
Free Frames	Show the frame number and location of free frames
Memory Details	List the details about memory allocated to a given process
Allocated Frames	Show the process id and frame number of all allocated frames
Display Registers	Displays the current contents of the CPU registers (GPR, SPR, flag reg.)

Miscellaneous Commands

Shutdown	Shuts down the operating system, during shutdown process all processes should be killed and their process IDs displayed
*Hibernate	Save the current state of the system and resume from the same state when the system is started again

Commands marked with '*' carry bonus marks